



Halloween Issue

VOL. LXV NO. 10

PO Box 3454, Tustin, CA 92781

October 2024

The Prez Sez...

By Nicholas AF6CF



Hello and Greetings to all!

Just like every year, October is the month when the year starts to feel like the holidays are around the corner, as we will only have one more General Meeting before the Holiday party. We do have plans for the rest of the year with the upcoming Club Auction this month. This is your opportunity to convert those items that are eating up space in your garage into money at the auction. Or you could donate them to the Club to help defray its expenses. Or you may want to buy some exotic radio accessory at a bargain price. The possibilities are endless as you can see.

This year the auctioneer will be Bob AK6R, of Palomar Engineers fame. You cannot miss this event, open to everybody, even if you are not a Club member. See page 25 for details. At the November meeting, we will have a highly regarded speaker and then the elections for next year's Board of Directors. This is your chance to help the Club run its daily business by becoming one of the Directors (or even President). If interested, please contact Janet KL7MF or myself to be in the list. Any current Club member can have any position on the board. The Party date has been set for Friday December 6th at Mimi's Café in Tustin. Mark your calendars early so you don't miss it. As usual, I look forward to an eyeball contact with you all at the next General Meeting.

73 DE AF6CF



NEXT GENERAL MEETING

IN-PERSON

OCARC

presents

"October Auction"

**Bob Brehm AK6R
Auctioneer**

**October 18th, 2024, sign-up 6pm
at the**

**American Red
Cross**

**Orange County Chapter
Santa Ana, Room 208**

NEXT BOARD MEETING

Saturday, November 2nd, 2024

In This Issue

The Prez Sez	1
Club Information	2
OCARC Auctioneer	3
Heathkit of the Month #126	4-11
Puzzler	12
Carl Flint N8AE Obituary	12-13
Ham License Testing Now Available.....	14
RadioActivity	15
California QSO Party Results	16-18
September General Meeting Minutes	19-20
October Board Meeting Minutes	21-23
OCARC Equipment Available	24
OCARC Auction Announcement	25-26
Treasurer's Report	27



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Monthly Events

Membership Meetings*

Time: 7:00 PM
When: 3rd Friday of each Month
Red Cross Orange County, Room 208
600 N Parkcenter Dr, Santa Ana
(Replaced by the Christmas Party
in December.)

Board Meetings

First Saturday of each Month
*Board will handle Club business now
IN-PERSON.*

Club Nets (Listen for W6ZE)

10M ~ 28.375 MHz SSB

Wed- 7:30 PM - 8:30 PM
Net Control: Corey, KE6YHX
Alternate Net Control: AJ, KN6WNO

2M ~ 146.55 MHz Simplex FM

Wed- 8:30 PM - 9:00 PM
Net Control: Corey, KE6YHX
Alternate Net Control: AJ, KN6WNO
Echolink Node: KK6TRC-L

75M ~ 3.883 MHz LSB

Tue @ 8:00 PM
Net Control: Corey, KE6YHX

Other Nets

**Catalina Amateur
Repeater Association (CARA)**
147.090 MHz (+0.600 MHz) No PL
Monday - Friday
9:00AM & 9:00PM
Prg. Director. Tom W6ETC
COME JOIN US

OCARC 2024 DUES:

*Membership period is:
1 January to 31 December*

Individual New or Renewal: \$30
Family New or Renewal: \$45
Teen New or Renewal: \$15

***New Member Dues** are prorated
quarterly and includes a badge:*
Additional Badges¹ \$3

Use one of our interactive online forms
to calculate current prices, join, renew, or
order badges:

<https://www.w6ze.org/FormsShortcut.html>

¹ \$3 or less + mailing. See form.

W6ZE ANNUAL AUCTION!

Ladies and Gents, it's that time of year again! W6ZE's annual AUCTION is this coming Friday, October 18, lest it has slipped your mind.

Room 208 at the American Red Cross at 600 Parkcenter Drive in Santa Ana will be open starting at 6 pm for registration, set up, and viewing. Register to get a bid number and tag your items, or just come early to browse the offerings. Historically we've seen everything from hardware to high-end radios, with a dash of antennas and antiques, so don't miss the opportunity to come away with something unexpected and fun.

This year's auctioneer is our good friend, Bob Brehm, AK6R, from Palomar Engineering, who was our August guest speaker educating us all about RFI. Bob has provided his auctioneering talents to several different SoCal radio clubs over the years, so he should keep everything going at a lively pace. Be mindful that he may have his eye on some of the goods as well!

We look forward to seeing you all at the auction this year. Be sure to bring cash or the check book; no credit cards accepted. Come join the fun!

Janet Margelli, KL7MF
OCARC Vice-President (for two more months)



Heathkit of the Month #126:

by Bob Eckweiler, AF6C

Heathkit

AMATEUR RADIO - SWL

Heathkit AM-1

Antenna Impedance Meter

Introduction:

The AM-1 Antenna Impedance Meter (**Figure 1**) was the fifth amateur product introduced by Heathkit. In September of 1952 Heathkit entered the field of amateur radio in a very gentle manner with the GD-1 Grid Dip Meter¹. They already made a shortwave receiver, the AR-1 that covered the broadcast band and up to 20 mc. But without a BFO or any band-spread and no ham band markings, it was not suitable as an amateur receiver².

Heath had tried its hand back in 1948, advertising an Amateur Transmitter under the Heathkit brand for \$19.95. A separate power supply was offered for an additional \$10.00. The ad only appeared for a couple of months and whether any were ever shipped appears lost to history. Also, around the same time, Heath offered a non-Heathkit branded 1-watt 80 meter “midget” transmitter kit utilizing a converted WW-II walkie-talkie module for \$3.95 (less key and 4 pounds of batteries!) Chuck Penson – WA7ZZE discusses both in the forward to the 3rd edition of his *Heathkit – A Guide to the Amateur Radio Products* book³, which belongs in every Heath aficionado’s library.

Here is a link to the index of Heathkit of the Month (HotM) articles:

http://www.w6ze.org/Heathkit/Heathkit_Index.html

1. Notes begin on page 11



Figure 1: The Heathkit AM-1 Antenna Impedance Meter. The fifth Heathkit amateur product.

Photo: Bob-AF6C

Some might classify the Grid Dip meter as test equipment instead of amateur gear, but Heath included it in the amateur sections, (**See Figure 2**). It is primarily a device for checking and designing antennas, traps, and tuned circuits in amateur equipment. The GD-1 sold well and Heath upgraded it to the GD-1A in time for the main 1953 catalog.

In early 1953, too late to make the main 1953 catalog, Heathkit released the – soon to be very popular – AT-1 Amateur Transmitter. It appeared in the Spring 1953 catalog and sold for \$29.50. That summer’s catalog introduced the AC-1 antenna coupler⁴ for (\$14.50) It was announced boldly on the last page, but hidden within the AT-1 description

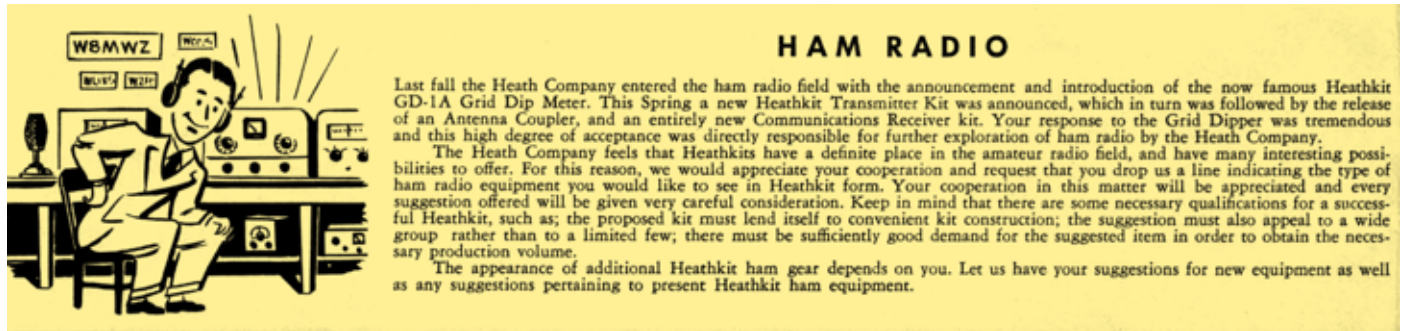


FIGURE 2: Heath discusses its start in the field of “ham” radio kits in a short essay on page 6 of the Summer 1953 Flyer. On page 2 the AR-2 receiver is introduced, as is the AC-1 antenna coupler (within the AT-1 ham transmitter or page 3). The GD-1A is shown on page 6.

on page 3. Also introduced was the AR-2, a communications receiver (\$25.50)⁵ that could be used with the AT-1 for amateur radio. Also in that Summer catalog was a dedication from Heathkit promising to grow into the amateur radio field and asking customers for product suggestions. (again **Figure 2**).

The Heathkit AM-1 Kit:

The AM-1 was introduced in the fall of 1953 for \$14.50. **Figure 3** shows an ad for the AM-1. The AM-1 continued to be offered for sale until around mid-1960. It was absent in the Fall / Winter 1960-61 catalog. Its demise was probably due to the AM-2 SWR meter⁶, which came out in late 1957, was easier to use and became very popular. Shortly after the AM-2 was released the AM-1 was only advertised in the full catalogs, but not the abbreviated catalogs, which gave favor to the \$15.95 AM-2.

The AM-1 Specifications:

Here are the specifications⁷ for the AM-1 from the manual [595-79]:

Frequency Range:	0 - 150 megacycles
Impedance Range:	0 - 600 ohms
Null Indicator:	100 μ ampere meter
Dimensions:	2½" x 3" x 7"

Heathkit ANTENNA IMPEDANCE METER KIT

MODEL AM-1
\$14.50
Shipping Weight 3 lbs.

Features:

- Sensitive 100 microampere Simpson meter
- Precision resistance type SWR bridge.
- Frequency range 0 - 150 MC.
- Impedance range 0 - 600 ohms.
- Headphone jack for phone monitoring.

Attention hams! Don't overlook the many possibilities of the Heathkit Antenna Impedance Meter. It is easily energized by any low power RF source such as the Heathkit Grid Dip Meter. The frequency and impedance ranges, ease of operation and high sensitivity make it extremely useful in your ham shack.

Determine antenna resonance and resistance, transmission line surge impedance and receiver input impedance. Works with half and quarter wave lines; half wave and folded dipoles; harmonic, mobile and parasitic beam antennas. Use it with headphones to monitor radio telephone transmissions. Match transmission lines for minimum SWR. Locate radiation from natural objects by using the AM-1 to obtain a relative indication of field strength.

Ruggedly built with shielded aluminum cabinet and substantial binding posts. The construction manual is a text book in itself. The Heathkit Antenna Impedance Meter is efficiently designed for long and useful service.

All metal parts are completely formed and punched. Each component carries the now famous Heathkit guarantee of good quality and dependable service. No longer must you purchase a battery of instruments when one inexpensive item can perform so many tasks.

Figure 3: Early ad for the AM-3 from the Winter 1953-1954 Heathkit Flyer. This is the fifth Amateur product offered by Heathkit.

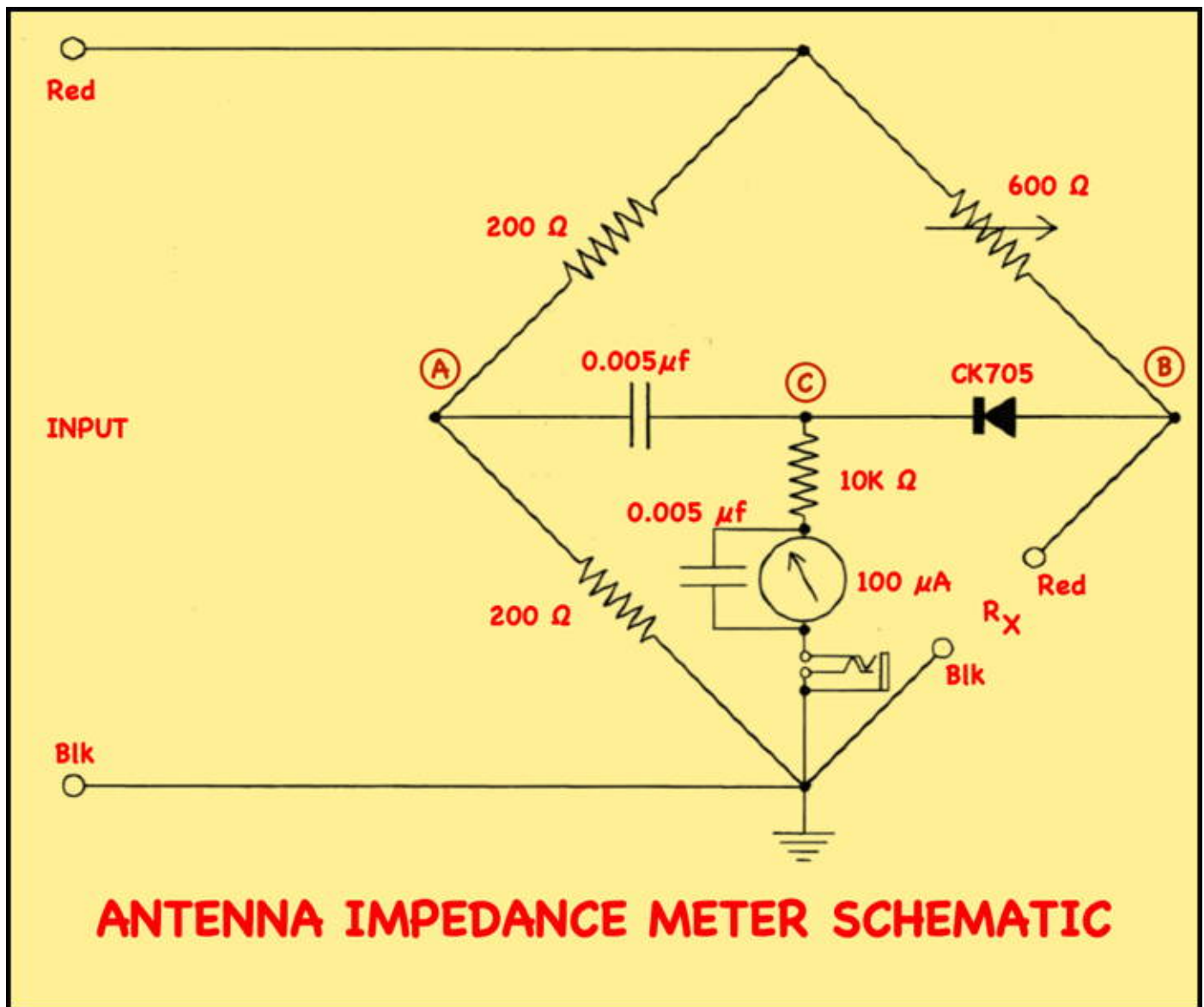


FIGURE 4: An author annotated schematic of the AM-1. Points A, B and C are discussed in the circuit description section. Looking at the front of the AM-1 with the meter at the bottom, the binding posts on the left are the **INPUT**. And the binding posts on the right are **R_X**.

Net Weight: 1 lb.
Shipping Weight: 3 lbs.

light battery to prevent the meter from a 50% over-travel and possible damage.

One might be surprised that the frequency specification goes down to zero, but you can connect a pen-light battery to the **INPUT** (+ to the red post) and place an unknown resistor between 1 Ω and 600 Ω across **R_X** and read the resistance by turning the control until the meter nulls. *It is suggested you add a 5K - 6K Ω resistor in series with the pen*

No specification is given for the maximum power that can be applied to the **INPUT** terminals but, in the manual ½ watt is mentioned. This is probably because Heath assumed it would be used with a grid-dip meter. If using a directly connected signal generator, start with maximum attenuation and, with the AM-1 in an unbalanced condition,

increase the amplitude until the meter reaches near full scale.

The AM-1 Circuit Description:

Figure 4 is an author annotated schematic of the AM-1. Notice that there are no batteries or other power source. Power is provided by the grid dip meter or signal generator, coupled to the INPUT binding posts. The circuit itself is a simple bridge. Two precision 200 Ω resistors divide the input RF voltage in half at point A. The voltage at point B depends on the setting of the potentiometer and the impedance to be measured R_X . When the variable resistor is adjusted to a point where it is equal to the resistive component of the unknown impedance R_X , the voltage at point B will also be at half the input voltage, and the RF voltage between points A and B will be at or near zero. This RF voltage between points A and B is rectified by the CK705 diode and filtered by the 0.005 μ f capacitor producing a DC voltage, relative in value to the RF voltage, at point C. The 10K Ω resistor limits the meter current so 1 volt DC at C will cause full scale meter deflection. any residual RF voltage is bypassed by the second 0.005 μ f capacitor across the meter. When the bridge is balanced the meter will be at a minimum reading close to or at zero.

At the time the AM-1 was released a majority of hams were using balanced feed-lines, usually operating at impedances between 200 and 600 ohms. Coaxial feed-line, much of it WWII surplus, was becoming available, but was not in heavy use and offered numerous advantages over balanced feed-line at the cost of higher losses, especially at high SWR.

AM-1 Operation:

Using the AM-1 requires a bit of work. Unlike the AM-2 SWR bridge which sits in your coax feed-line while operating your radio, the

AM-1 needs to be connected either, directly at the antenna terminals, or at the far end of a feedline that is a multiple $\frac{1}{2}$ electrical wavelength in length at the measured frequency. The AM-1 may be used to trim a length of feedline to the desired multiple half wavelength, (and also to a $\frac{1}{4}$ wavelength when needed). These lengths of feedline have magical properties for antenna testing, trapping and adjustment. **(See Sidebar).**

AM-1 Operation:

Refer to **Figure 5** and link-couple your grid dip meter to the input terminals of the AM-1. The link should have about $1\frac{1}{2}$ turns when testing above 15 mc and $3\frac{1}{2}$ turns below 15 mc. The amount of turns is not critical. Add a turn if more excitation is needed.

To measure the impedance of an antenna, connect the AM-1 R_X terminals directly to the antenna with leads as short as possible, or use a feed line that is a multiple half-wavelength at the measurement frequency. Set the grid-dip meter to the desired test frequency⁸. Adjust the dial on the AM-1 for minimum meter reading and read the resistive impedance on the dial.

To find the electrical half-wavelength length use the following formula:

$$\lambda_{1/2} = \frac{491.79 * V_f}{F_{mc}}$$

Where:

$\lambda_{1/2}$ = $\frac{1}{2}$ Wavelength in feet at F_{mc} .

F_{mc} = Frequency in megacycles (MHz)

V_f = Velocity factor⁹ of transmission line.

Select a multiple of $\lambda_{1/2}$ that fits your requirements, cut your feed line a bit on the long side, and with the far end of the transmission line shorted and the dial on the AM-1 at zero, adjust the grid dip frequency for a

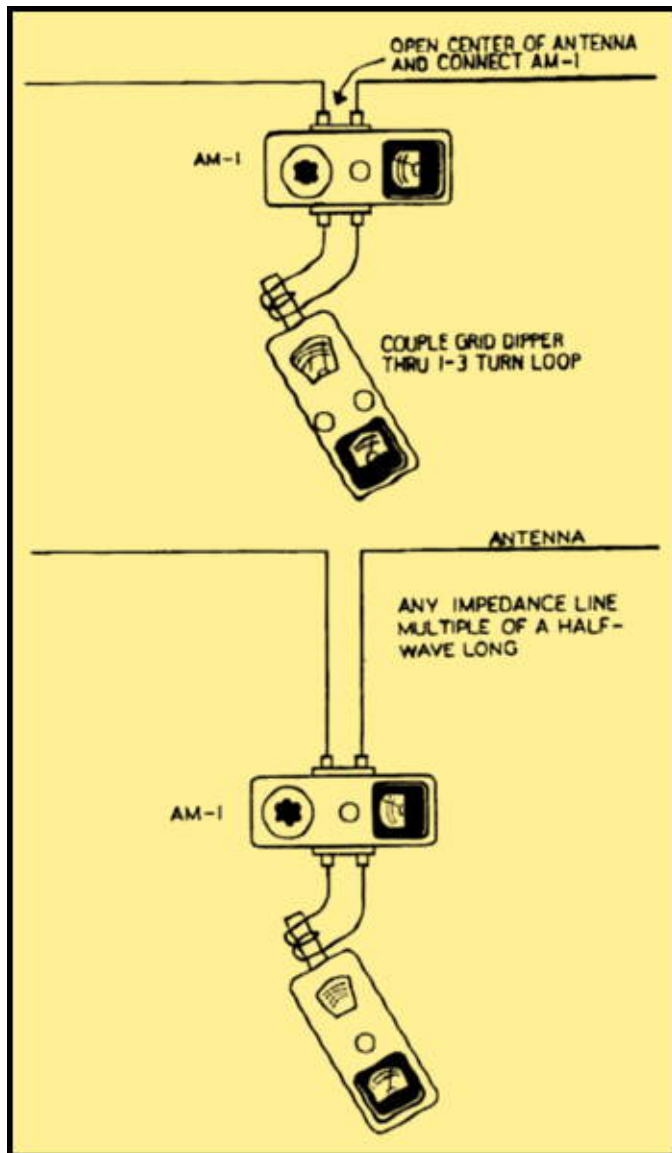


Figure 5: Top view shows making a measurement at the antenna terminals. Bottom view shows using a transmission line to make the measurement away from the antenna. The transmission line should be a multiple of the electrical $\frac{1}{2}$ -wave at the test frequency. The AM-1 may be used to find the correct length.

null on the meter. Read the frequency; it should be lower than desired. Remove a short piece of the transmission line and re-measure. Continue shortening the line until the null occurs at the desired frequency. Your transmission line is now an accurate multiple half-wavelength at that frequency. Connect the far end of the transmission line

to the antenna, and measure the antenna impedance at the near end of the transmission line. The multiple half-wavelengths will reflect the same impedance as the antenna feed point, at that frequency.

The AM-1 has many other uses, like finding a receiver's input impedance, adjusting harmonic antennas, quarter-wave and ground-plane vertical antennas, mobile antennas, monitoring AM audio while transmitting, measuring relative field strength, and adjusting Q-bars (quarter-wave transformers). Instructions are in the manual. A partial copy of the manual is available online.

Assembly:

The parts that mount on the cabinet, with an open front and rear, are assembled first. Four binding posts, two on each side, mount on polystyrene insulators. The cabinet hole for the hot (red) binding posts has a large hole to reduce capacitance to the cabinet. See **Figure 6**. The cabinet is then set aside till

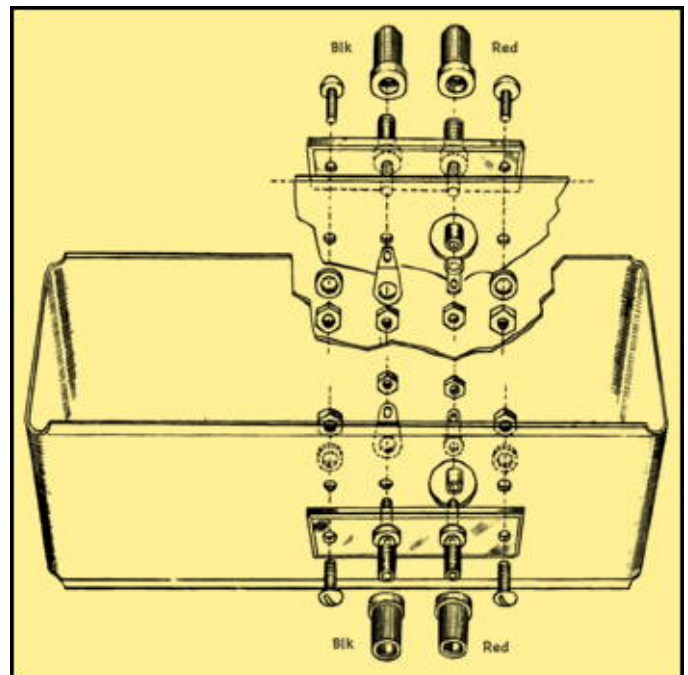


Figure 6: Polystyrene insulators reduce input capacitance between terminals and the cabinet.

later, and a chassis is assembled, comprised of two metal brackets and a flat, drilled insulator. The $600\ \Omega$ variable resistor control is mounted to the insulator section of the chassis assembly, and an insulated shaft is attached. Thus the control is isolated from the conductive surroundings, again to reduce stray capacitance. The meter is attached to the front panel, and the chassis assembly is also attached to the front panel, using the $\frac{1}{4}$ " phone jack. The insulated shaft extension should fit through the hole in the front panel. Initial wiring is begun; the meter and phone jack are wired along with the two $0.005\ \mu\text{f}$ capacitors, the 10

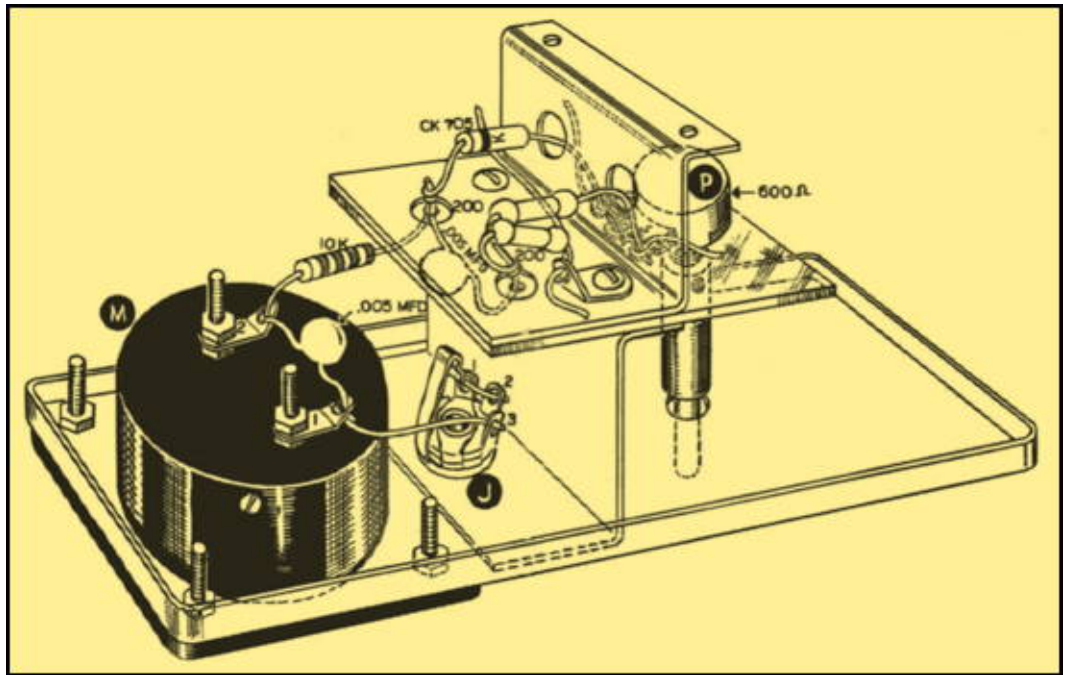


Figure 7: Wiring of the chassis assembly and front panel.

$\text{K}\Omega$ resistor, the CK705 diode and the two $200\ \Omega$ precision resistors. Other wiring is added to complete the circuitry, except for the wires to the binding posts, which are installed but left unconnected at the binding post end. (**Figure 7**). The cabinet is then placed over the front panel – chassis assembly, and the unconnected wires are soldered to the binding posts. (**Figure 8**). **Figure 9** and **Figure 10** are photos of an AM-1 with the rear cover removed.

Once the control knob is added, the feet are attached to the back panel, and the back panel is mounted to the rear of the cabinet. then check-out and calibration begin.

AM-1 Calibration:
The markings on the skirt of the control knob are coarse since the controls vary somewhat. However, the skirt of the knob is frosted and

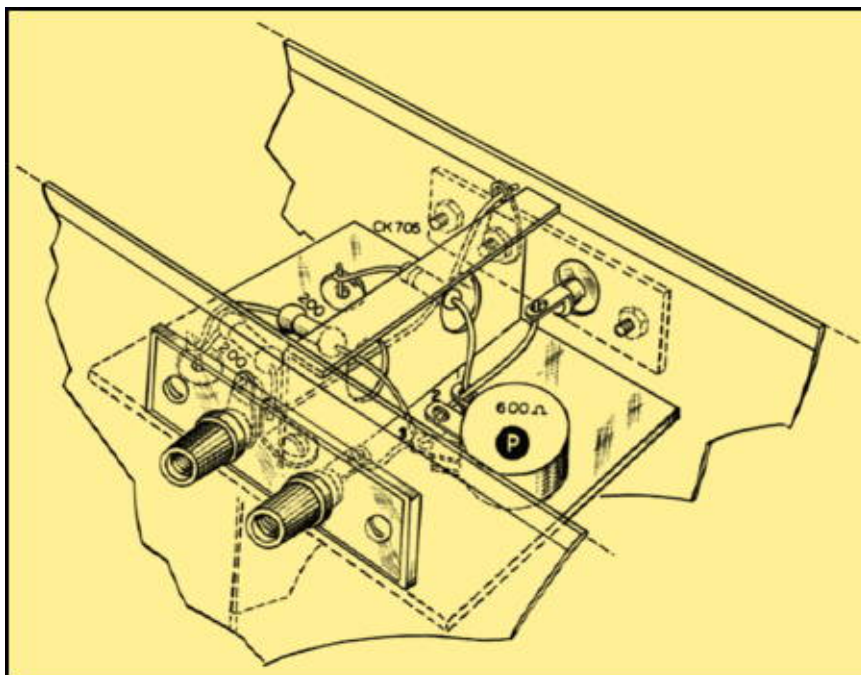


Figure 8: Wiring of the chassis assembly and binding posts.



Figure 9: The AM-1 with the rear cover off, looking in with the top towards you. Note the two red binding posts. The back of the control is mounted on the insulated plate with the insulated shaft extending through the front panel for isolation.

Photo : Bob - AF6C

can be marked on with a pencil (and easily erased if a new calibration becomes necessary). To calibrate the AM-1 you can use an ohmmeter, resistance bridge, or another instrument that measures resistance accurately. In the manual Heath tells how to age the control; however, since it's over 60 years it's already well aged! To isolate the AM-1 meter circuit, an unwired phone plug needs to be plugged into the **PHONES** jack. The resistance of the control may now be measured between the AM-1's two red binding posts. Using a pencil, mark the knob skirt with accurate notations.



Figure 10: The AM-1 with the rear cover off, looking in with the bottom towards you. The meter is visible lower center with a 0.005 capacitor across its terminals and the 10K resistor off the terminal to the left. Above the chassis are the diode (left) and the two precision resistors (right). Just visible sticking out below the chassis (center) is the other 0.005 capacitor.

Photo : Bob - AF6C

Comments:

While the AM-1 was a versatile instrument in its day, it was most useful measuring wire antennas, especially when fed with a balanced feed line. However, the convenience of 50Ω and 72Ω unbalanced coaxial transmission cable, even with its higher losses, soon became the transmission line of choice for hams. With the introduction of the AM-2 SWR Bridge reflectometer, a 50Ω / 72Ω instrument that could be left in the line to continuously register SWR, hams quickly started favoring the AM-2 over the AM-1. What the AM-2 lacked in versatility

it made up in convenience. Still the AM-1 had uses for trimming feed lines and stubs to specific lengths.

I'm currently exploring a non-Heathkit article for a radio magazine. If it comes to be, I'll first mention where, here. Until then, my Heath articles might slow down some. But, they will be back, and hopefully with me learning improved writing skills in the process.

73, from AF6C



Notes:

1. In HotM #7 The later solid-state Heathkit HD-1250 was covered. In the introduction of that article the Heathkit GD-1, GD-1A & GD-1B are briefly discussed, as is the HM-10 "Tunnel [diode] Dipper".
2. The first Heathkit modification article published in QST was to convert the AR-1 by adding a BFO AVC, RF gain control, bandspread with vernier drive and a phone jack. Modifying the Heathkit AR-1 Receiver for Amateur Use
3. Heathkit – A Guide to the Amateur Radio Products (Third Edition) 2021, by Chuck Penson. ISBN 978-0-578-91051-2. The book is currently **SOLD OUT**. A second printing is currently pending.
4. The AC-1 is featured in HotM #13 (February 2009). It is available at: https://www.w6ze.org/Heathkit/Heathkit_013_AC1.pdf
5. The AR-2 kit came complete with all parts and tubes, but not a cabinet. Heath separately sold a Proxylin impregnated fabric covered plywood cabinet (Part # 91-10) for \$4.50.
6. The AM-2 is featured in HotM #37 (January 2012): https://www.w6ze.org/Heathkit/Heathkit_037_AM2.pdf
7. In keeping with the period of the kit kc is used instead of kHz, mc instead of MHz, and µpf instead of pf.
8. The dial accuracy of most Grid Dip Oscillators (GDOs) is pretty coarse. A communications receiver located nearby with a short antenna can be used to more accurately determine (or set) the GDO frequency.
9. Velocity Factors vary with transmission line manufactures as well as type of feed line. Here's some approximate numbers: (For coax) Polyethylene 0.66; Foamed polyethylene 0.78 to 0.88; (For parallel line) Twin-lead 0.88; window-line (450Ω): 0.91; open line (600Ω): 0.92. The 2000 ARRL Handbook gives over 100 popular manufacturer's data [Page 19.2].

Notes for HotM #126 (AM-2) 10/2024

Sidebar – Basics of ½ and ¼ wavelength Feed-Lines:

All feed-lines have a nominal impedance. Coaxial cable commonly is 50Ω or 75Ω; balanced feed-line is commonly 150Ω, 300Ω 450Ω or 600Ω.

When an antenna perfectly matches the feed-line impedance, the impedance remains constant at all points along the feed-line. However, if there is a mismatch between the antenna and feedline impedance, the impedance changes along the length of the feedline. Say the feedline is nominally 150Ω but the antenna is 50Ω (An SWR of 3:1) Moving from the antenna towards the transmitter by ⅓ wavelength steps, the resistive component of the impedance goes to 90Ω, 450Ω, 90Ω and at ½ wavelength from the antenna it is again 50Ω. So if you need to measure the impedance at the antenna, but it is out of reach, you can measure the impedance at the end of a ½ wavelength (or multiple ½ wavelengths) of feedline. Feedline loss introduces some errors, minimal for balanced line, higher for coaxial line.

While a half-wave transmission line repeats the input impedance, a quarter wavelength transforms the impedance per the following equation:

$$Z_{1/4} = \frac{(Z_{TL})^2}{Z_0}$$

Where:

Z_{TL} = The transmission line impedance.

Z_0 = The Impedance at 0 wavelength.

$Z_{1/4}$ = The Impedance at ¼ wavelength.

A classic solution is when the quarter wave transmission line is left open (Z_0 = infinity) then $Z_{1/4}$ = 0, or a short at the given frequency. This can be used to trap unwanted signals.

Since the AM-1 really only gives the resistive component of the impedance, the reactive component in this discussion has been left out. At the ⅓ wave 90Ω resistive points there is also a reactive component of ± 120Ω.

Remember, if you are getting rid of any old Heathkit Manuals or Catalogs, please pass them along to me for my research.

This article is Copyright 2024 R. Eckweiler, AF6C and The OCARC Inc.

Thanks - AF6C

? PUZZLER ?

Here's an **October Puzzler**. It's really simple if you think about it for a while!

A rare DX location was coming on the air. The operator was a friend of OCARC and wanted to give a chance for its members to make a contact. So a special coded message was sent to club members, and if they could figure out the code, they'd have an advantage to making a contact. The single DX operator would be operating only on 20M SSB: His operating frequency and expected starting time of the operation was well published. Here is that code message; can you solve it?:

**PORETAOIN TSRAST AHFL OHRU AELRY.
ILTSNENIG PU WTNEYT IKOLYCLCSE.**

If you don't try to solve it, when you read the answer next month you're going to slap your forehead and cry DOH, just like Homer Simpson. Save yourself the embarrassment and send your answer to: puzzler@w6ze.org.

Don't be the one to cry **DOH!!**

? PUZZLER ?

Carl Flint - N8AE SK



Sad news from Michigan. Former club member Carl Flint - N8AE passed away on September 8TH at the young age of 68. The cause of death was not given.

Carl, and his wife Dee - N8UZE were only club members for a few years, but they made a big impact on the club and its activities. Dee, who had moved from Michigan to Tustin, CA, to work for the Fisker automotive company, joined the club at the August 20, 2010, meeting. Carl remained employed in Michigan until he joined Dee in early 2011, in time to volunteer with Dee as Field Day co-band captains for 80-meter phone, CW and digital modes.

Carl and Dee participated at the April 23RD club event Portables-in-the-Park. Carl provided an 80 meter dipole which they would use for field day that year. During the 2011 field day Carl spent some time helping Steve - N1AB in the GOTA tent. When he returned to 80 meters he had two GOTA graduates in tow, and let them get some experience on 80 phone with the "big-boys" (Figure 1).



Figure 1

Carl and Dee remained very active in the club attending board meetings and club activities



Figure 2

with enthusiasm. In November Carl was elected club vice president for 2012. He and Dee were also recipients of the coveted OCARC Good of the Club Award for 2011 (Figure 2).

Tim - N6GP reports that *“Carl was the first one in our club to talk about us entering in Winter Field Day - way before the event grew in popularity.”* (Jan board meeting under Good of the Club). At the first general meeting with Carl as VP, our president was missing and Carl jumped in and took the reins.

In March, Dee announced that Carl had to resign his VP, as well as his FD Co-chair position due to his new job that required a lot of travel. Dee filled in for Carl as FD chair.

Besides amateur radio, Carl enjoyed photography, he was an avid outdoorsman and combined photography with his walks. He often visited the wildlife preserve in Bolsa Chica and would display some fantastic images. **Figure 3** is a favorite.

Carl and Dee rejoined for 2013. However, business had not been going well at Fisker, and Dee's position in CA closed and she and Carl returned to Clinton Township, Michigan. At the 80TH club reunion they checked in on Skype from their midwest digs. Though they were only members for a few years, they were sorely missed by all who got to know them. **Figure 3** is just a sample of Carl's photographic skills. More are on his QRZ page.

73, from AF6C



Figure 3

Amateur Radio License Testing Now Available!

W6ZE now offers license exam sessions just before our general meeting at 5:30 PM in the same location as the meeting for new licensees and upgrades. The cost is \$15.

Requests for testing should be sent to Ken Simpson, w6kos@w6ze.org, or by calling 714-651-6535.



RadioActivity

October 2024

Upcoming Activities:

October

- ***10-10 Int. 10-10 Day Sprint:** 0001 UTC to 2359 UTC Sunday Oct. 10.
- **Oceania DX Contest, CW:** 0600 UTC Saturday Oct. 12 to 0600 UTC Sunday Oct 13.
- ***CQ World Wide DX SSB Contest:** 0000 UTC Saturday Oct. 26 to 2359 UTC Sunday Oct. 27.

* Indicates club entries are accepted

** Indicates team entries are accepted

Note: When submitting logs for ARRL Contests indicate your club affiliation as "Orange County ARC"

State QSO Parties:

- **Nevada QSO Party:** 0300 UTC Saturday October 12 through 2100 UTC Sunday Oct. 13.
- **Arizona QSO Party:** 1500 UTC Saturday October 12 to 0500 UTC Sunday Oct. 13.
- **Pennsylvania QSO Party:** 1600 UTC Oct. 12 to 0400 Oct. 13 and 1300 UTC to 2200 Sunday Oct. 13.
- **South Dakota QSO Party:** 1800 UTC Saturday Oct. 12 through 1800 UTC Sunday Oct 13.
- **New York QSO Party:** 1400 UTC Saturday Oct. 19 through 0200 UTC Sunday Oct. 20.
- **Illinois QSO Party:** 1700 UTC Sunday Oct. 20 through 0100 UTC Monday Oct. 21.

November

- ***ARRL Sweepstakes Contest, CW:** 2100 UTC Saturday Nov. 2 to 0300 UTC Monday Nov. 4.
- ***10-10 Int. Fall Contest, Digital:** 0001 UTC Saturday Nov. 9 to 2359 UTC Sunday Nov. 10.
- ***ARRL Sweepstakes Contest, SSB:** 2100 UTC Saturday Nov. 16 to 0300 UTC Monday Nov. 19.
- ***CQ Worldwide DX Contest, CW:** 0000 UTC Saturday Nov. 23 to 2359 UTC Monday Nov. 24

Repeating Activities:

- **Phone Fray:** Every Tuesday night at 0230 UTC to 0300 UTC.
- **CWops Mini-CWT:** Every Wednesday at 1300 to 1400 UTC, 1900-2000 UTC and Thursday 0300-0400 UTC. 0700-0800 UTC
- **SKCC:** Weekend Sprintathon (Straight Key CW) on the first weekend of the month after the 6TH of the month. 1200 Sat. to 2359Z Sunday.
- **SKCC:** Sprint (Straight Key CW) 0000Z to 0200Z on the 4th Tuesday night (USA) of the month.
- **K1USN Slow Speed Test:** (CW, 20WPM Max.) Every Friday 2000 UTC to 2100 UTC
Every Sunday night at 0000 UTC to 0100 UTC Monday
- **ICWC Medium Speed Test:** (CW, 25WPM Max. Every Monday 1300 UTC to 1400 UTC 1900 UTC to 2000 UTC and Tuesday 0300 UTC to 0400 UTC

OCARC Club Nets:

- **75 Meter Net:** Every Tuesday night at 8:00 pm to 8:30 pm Local Time. SSB 3.883 MHz
- **10 Meter Net:** Every Wednesday night at 7:30 pm to 8:30 pm Local Time. SSB 28.375 MHz
- **2 Meter Net:** Every Wednesday night at 8:30 pm to 9:30 pm Local Time. FM Simplex 146.55 MHz

Other Nets:

- **Net-AT-9:** Monday thru Friday 9:00 am and 9:00 pm Local Time 147.090 MHz (+600 MHz) No PL

Other Links:

- [ARRL Contest Calendar](#)
- [VOACAP Online for Ham Radio](#)

Send an email to Ron W6WG, w6wg@w6ze.org to have your favorite activity or your recent RadioActivity listed in next month's column.

73, Ron W6WG

Call: **W6WG**

Operator(s): [AK6GR](#) [N3BKV](#) [W6WG](#)

Station: W6WG

Class: **M/S LP**

QTH: Kern

Operating Time (hrs): 21

Location: In State/Province

Remote operation

California QSO Party - 2024
Raw Scores by OCARC Members
Posted on www.3830scores.com



Summary:						
Band	CW Qs	Ph Qs				
160:	0	0				
80:	12	0				
40:	111	0				
20:	258	37				
15:	237	30				
10:	77	73				
Total:	695	140	Mults 55	Total Score	130,075	

Club: Orange County Amateur Radio Club

Call: **N6OKU**

Operator(s): [N6OKU](#)

Station: N6OKU

Class: **SO LP**

QTH: Garden Grove, CA (ORAN)

Operating Time (hrs): 14.5

Location: In State/Province

Summary:						
Band	CW Qs	Ph Qs				
160:	0	0				
80:	0	0				
40:	0	0				
20:	0	392				
15:	0	254				
10:	0	401				
Total:	0	1047	Mults 58	Total Score	121,452	



Club: ORANGE COUNTY AMATEUR RADIO CLUB

Call: **N6GP**

Operator(s): [N6GP](#)

Station: N6GP

Class: **SO LP**

QTH: ORAN

Operating Time (hrs): 6.5

Location: In State/Province



Summary						
Band	CW Qs	Ph Qs				
160:						
80:						
40:	30					
20:	88					
15:	123					
10:	160					
Total:	401	0	Mults 46	Total Score		55,338

Club: Orange County Amateur Radio Club

Comments:

Do propagation conditions get any better than this? I don't think so. This will probably be the best CQP condx of our lifetimes. Solar Flux 277, K index 2. Incredible. At times had multiple Europeans calling me on 10 meters. Worked DX like Turkey and Corsica.

I did not have much time to operate this weekend. Had radio club Board meeting first hour of contest. Orange County ARC had a potluck 1-5PM for CQP with a Multi-2 station running in the contest. Thanks to AJ KN6WNO for hosting! It was fun elmering a few there to work new DX countries on 10m SSB into a vertical. I was still on my backup rig, with the other in the shop.

Rig: Icom IC-7000 , 100W

Antennas: Wilson System 2 yagi up 23 ft.

40 meter inv vee up 40 feet.

N3FJP Software

Was very strange. Did not work any Ohio stations until Sunday. Usually there are dozens. Tnx for all of the Q's!

Call: [KN6WNO](https://www.kn6wno.com)Operator(s): [KN6WNO](https://www.kn6wno.com) , N6GP

Station: KN6WNO

Class: **M/2 HP**Class Overlay: **New-Contester**

QTH: ORAN

Operating Time (hrs):

Location: In State/Province



Summary: Scores			
Band	CW Qs	Ph Qs	
160:			
80:			
40:		2	
20:		6	
15:		5	
10:	27	23	
Total:	27	46	Mults 28 Total Score 4,844

Source: www.3830scores.com

Bruce, WA7BNM



General Meeting Minutes Sept 20th, 2024

President Nicholas Haban AF6CF started the meeting promptly and proceeded with the Pledge of Allegiance.

Everyone in attendance took a moment to introduce themselves. Next, Nicholas announced that the club's December celebration will be on the evening of December 6th. The location will be Mimi's Café in Tustin.

Janet Margelli KL7MF introduced tonight's speaker, Bill Scholz W1HIJ, USCG PACAREA Contingency Comm Net manager with the US Coast Guard Auxiliary. Bill's subject was "Maritime Comms and Amateur Radio Emergency Communications."



After the break, the meeting continued with club business.

Board Meeting

A quorum of club officers was in attendance.

The meal offerings for groups at the December Christmas Gathering were discussed. Members approved the meal offering that allowed a steak dinner to be served.

Treasurer's Report - Club finances are in good order.

Membership Report – 96 members, including 14 new for this year.

Publicity Report – The club net for 2 meters could use some more activity as of late.

VE License Testing Exams will be offered at 5:30 before our Auction on October 20th. Walk-ins are welcomed but give a shout-out if you know you will be there and want to test.

Tim N6GP showed his antenna setup for portable operation, including a Moxon antenna. The Moxon is very portable, can be pointed toward signals of interest, and packs up nicely.

Motion to Adjourn – made, seconded, and passed.



Magnifique Dinner

36

Served with your choice of coffee (0 Cal), tea (0 Cal), lemonade (120 Cal) or soft drinks (0-150 Cal).

E N T R É E S

Served with House Salad (190 Cal), Caesar Salad (220 Cal) or a Cup of Soup (200-240 Cal).

Grilled Strip Steak*

28-day aged 10 oz. USDA Choice New York Strip. House-made herbes de Provence butter (100 Cal) available upon request. Served with mashed potatoes and broccoli. (990 Cal)

Grilled Atlantic Salmon*

Grilled to perfection. Served with mashed potatoes and broccoli. (560 Cal)

French Pot Roast

A classique! Slowly braised and simmered with carrots, celery and onions. Served on a bed of mashed potatoes. (510 Cal)

Tuscan Style Grilled Chicken*

Grilled chicken, mashed potatoes, sautéed vegetables and artichoke hearts served in a savory sauce. (610 Cal)

Dessert

Molten Lava Cake

Hot molten cake served with a scoop of vanilla ice cream and garnished with a drizzle of chocolate and a fresh strawberry. (510 Cal)

Bread Pudding

Made from scratch bread pudding with raisins topped with whiskey sauce and whipped cream. (1060 Cal)

2,000 calories a day is used for general nutrition advice, but calorie needs vary. Additional nutrition information is available upon request.

*THESE ITEMS ARE COOKED TO ORDER AND MAY BE SERVED RAW OR UNDERCOOKED OR MAY CONTAIN RAW OR UNDERCOOKED INGREDIENTS. CONSUMING RAW OR UNDERCOOKED MEATS, POULTRY, SEAFOOD, SHELLFISH, OR EGGS MAY INCREASE YOUR RISK OF FOODBORNE ILLNESS.. - MimisCafe.com

**OCARC BOARD MEETING
MINUTES
2024-10-05**

The tenth Board Meeting of the year was on Saturday, October 5, 2024. The meeting was called to order by president Nicholas Haban AF6CF at 8:17 AM PDT. Eight (8) directors were present for a quorum. The secretary was absent, and an activities chairman has not been elected. Membership chairman Corey KE6YHX is acting as secretary pro-tem. Sixteen (16) topics were brought to the Board this morning, including four (4) Director Reports, and twelve (12) discussion items. One (1) motion was carried, adjournment.

Director Reports**•Treasurer:**

- Tim G. N6GP reports we have total inflows of \$3,710.36 and total outflows of \$2,681.43 for a net total of \$1,028.93, for 2024 to September 30, 2024.
- All Summer Field Day expenses are recorded.
- Our post office box has been paid for until September 2025.

•Publicity:

- AJ KN6WNO reports there are new OPs on the air due to the local fires. Some may be potential members.
- Our flyers for HRO are still in the works.

•Membership:

- Our membership chairman, Corey KE6YHX, reports we have ninety-eight (98) members.
- The membership chairman, as treasurer's assistant, reports he bought and has in-hand sixteen (16) yellow Post-It pads for seller use at the October Auction. They were \$8.23 (including tax and free shipping) on Amazon.

•Directors at Large:

- Joe KM6SVV reports the opportunity drawing was a success, with substantial cash inflows.

Current Business**•Newsletter Editors**

- | | |
|----------------|------------------------|
| November: | AJ KN6WNO |
| December: | Ken W6HHC |
| January 2024: | Tim M. N6TMT |
| February 2024: | --open to volunteers-- |
| March 2024: | --open to volunteers-- |

•General Meeting Programs

The Board discusses future General Meeting programs.

- | | |
|-----------|--|
| October: | Annual Club Auction |
| November: | Ken Miller K6CTW presents "Morse Code"
Plus: Club Board Elections |
| December: | Christmas Party Friday, December 6, 6:00 PM PST
Michael Geoghegan KX6A on "Search and Rescue" |

January: --to be determined--

February: --to be determined--

-President Nicholas AF6CF reports we are well organized for the Annual October Auction. The auctioneer has been arranged. We have an Auction Treasurer, and two Treasurer's Assistants. Dan Violette KI6X will be Auction Treasurer, our president Nicholas Haban AF6CF will sign disbursement checks, and Corey Miller KE6YHX will be Treasurer's Assistant. The doorman will be present. Our publicity chairman will send an auction advertisement to last year's bidders.

•OCARC Monthly Planner

-The secretary pro-tem has nothing to add.

•VE Sessions Schedule and Flyer

-Our Red Cross contact will need to arrange a different room for VE Testing, other than the Auction room, for the Annual October Auction. Ken W6HHC will contact him.

-AJ KN6WNO will arrange for flyers for the October Auction.

•Yorba Linda SK Equipment

-Club president Nicholas AF6CF is diligently selling what he can on eBay.

-The Heathkit SG7 must be reserved for Bob Eckweiler AF6C.

•October Pot Luck

-AJ KN6WNO and Corey KE6YHX have 15 to 20 guests as RSVPs.

•2024 Board of Directors Elections

-Election Committee:

Nicholas AF6CF

Tim M. N6TMT

Janet KL7MF

Nicholas AF6CF passes the Proposed Nominations Slate to the Board for edits.

-Current Board Candidates as of October 5, 2024:

PRESIDENT — --no nominations--

VICE PRESIDENT— Tim N6GP

SECRETARY — --no nominations--

TREASURER — Tim N6TMT

ACTIVITIES — Corey KE6YHX

MEMBERSHIP — Ron W6WG

PUBLICITY — AJ KN6WNO

TECHNICAL— Joe KM6SVV

DIRECTOR AT LARGE — Nicholas AF6CF & Janet KL7MF

All board positions are open to nominations.

New Business

•Activities Suggestions

-There are no further suggestions.

•Winter Field Day 2025

- The Winter Field Day Organization has changed hands many times. They have changed a few things this upcoming year. It will likely continue as being contest-oriented, but score posting in the past has been difficult or non-existent.
- Ron W6WG has Springview Middle School in Huntington Beach arranged for Winter Field Day in January. Ron agrees to be Winter Field Day Chairman again.
- POTA (Parks on the Air) is discussed as an alternative if Winter Field Day is discontinued.

Good of the Club

•December Holiday Party

Plans are on-track for the 2024 Christmas Party.

- Ken suggests we have the web site system up and available by November.
- The tickets are subsidized, so they are for members and a companion for each, only.
- Our limit is forty (40) attendees.

•Dues Increase for Inflation

-Tim G. N6GP discusses a \$5 dues increase to keep pace with inflation. We have a large financial surplus, so this will be pushed aside until needed.

•eBay Chairman

- Nicholas AF6CF needs help with the processes for equipment sales.
- Ken W6HHC suggests a Sales Chairman appointment or to change the Technical Chairman duties to cover.

Adjournment

A motion to adjourn is made, seconded, and carried at 9:36 AM PDT.

--Respectfully submitted by Corey KE6YHX, OCARC Secretary Pro Tempore

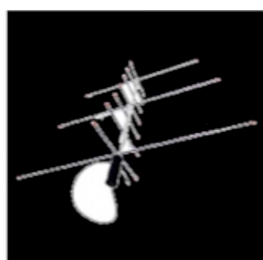




OCARC Equipment

Did you know OCARC has Ham equipment set aside for our members?!

We have a combination of Club owned equipment and member owned equipment that is accessible for you to check out for a temporary project, experiment, or to test out equipment before you purchase it yourself! Please reach out to an OCARC Board Member and tell us about your project.





OCARC 2024 ANNUAL RADIO AUCTION

**LIVE AUCTION TO BUY & SELL NEW/USED
HAM RADIO EQUIPMENT**

FRIDAY OCTOBER 18th, 2024

7:00 PM

Doors Open for Registration at 6:00PM

Held at the

American Red Cross

600 Parkcenter Drive

Santa Ana, CA

Second Floor Rm #208

→ SELLERS/BUYERS CAN REGISTER AT 6:00PM

FOR RULES & INSTRUCTIONS GO TO WWW.W6ZE.ORG

Some of the proceeds benefit the Orange County Amateur Radio Club



W6ETC 07/2024

AUCTION RULES

October 18, 2024 OCARC Radio/Electronics

The room will open at 6:00 PM to allow registration, set-up, and viewing. All buyers and sellers are welcome.

The following rules for the 2024 OCARC auction will be in effect:

1. Only Ham radio or electronic equipment / items will be allowed.
2. Sellers and Buyers should register to receive a bid number. The bid number is also the Seller's number. **Registration is Free***.
3. Sellers should tag each item in their lot. The tag should be identified with the Seller's number, a dash and a sequential number starting at 1 for each item to be auctioned. The tag should also indicate a minimum bid or "No Minimum Bid", and if needed, a short item description.
4. Only 3 items from a Seller's lot will be auctioned during each turn and then the auctioneer will move on to the next lot. Once all lots have been offered the auctioneer will start the second round of auctioning with the next 3 items starting with Lot #1.
5. Auction bidding will take place as follows:
 - (a) \$0.00-to-\$5.00 bidding will take place in \$0.50 increments.
 - (b) Over-\$5.00-to-\$50.00 bidding will take place in \$1.00 increments.
 - (c) Over-\$50.00-to-\$100.00 bidding will take place in \$5.00 increments.
 - (d) Over-\$100.00 bidding will take place in \$10.00 increments.
6. Rules 4 and 5 may be changed at the auctioneer's discretion to expedite the auction.
7. Payments for purchased items are due at the end of the auction and shall be by cash or check with the appropriate ID. No two-party checks or credit cards are allowed. Disbursements to the Sellers will be by OCARC check, only.
8. *Sellers will be charged 10% of the selling price for items sold by OCARC. A special table will be set up for items donated to the OCARC. Proceeds from the sale of donated items will go into OCARC operational funds.

Cash Flow

1/1/2024 through 9/30/2024

10/2/2024

Page 1

Category	1/1/2024- 9/30/2024
INFLOWS	
Badge Income	6.00
Donations - Field Day	223.00
Dues, Membership (Paypal 2025)	60.00
Dues, Membership (Paypal) 2024	1,378.46
Dues, Membership 2024	500.01
Field Day Food Income	240.00
Interest	178.39
Opportunity Drawing -Monthly	441.00
Sale Of Equipment	683.50
TOTAL INFLOWS	3,710.36
OUTFLOWS	
Bank Checks (Refill)	23.20
CA Statement Of Info filing	20.00
Field Day - Propane	57.07
Field Day Equipment	131.94
Field Day Food	487.31
Field Day Rental - Tent	310.00
Flowers Expense	50.00
Guest Speaker Meal - Exp	252.00
Historian Expenses	91.90
PayPal Fee	74.46
PO Box Rental	170.00
Refreshments Expense	51.79
Software License	24.00
Storage of Equipment - Ann Millard	325.00
Web Site Hosting	305.00
WFD - Food	62.91
WFD - Propane	40.85
WFD Flowers	34.00
WFD Rental - Tent	170.00
TOTAL OUTFLOWS	2,681.43
OVERALL TOTAL	1,028.93





The **ORANGE COUNTY AMATEUR RADIO CLUB, INC.**

RF - VOLUME 65 ISSUE 10 – October 2024

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